

## RECREATIONAL USE OF PSYCHOACTIVE SUBSTANCES IN THE MANIFEST PERIOD OF PARANOID SCHIZOPHRENIA IN ADOLESCENTS

<sup>1</sup>Rogov A.V., <sup>2</sup>Yusupova Z.Sh., <sup>3</sup>Uteulieva P.G., <sup>4</sup>Kholmurodova M. B.

<sup>1,2,3,4</sup>Tashkent Pediatric Medical Institute

<https://doi.org/10.5281/zenodo.10683003>

**Abstract.** *The cause of the development of schizophrenia remains unclear and is one of the pressing issues of our time. There are many hypotheses indicating the development of schizophrenia due to various factors such as genetic, neurobiological, environmental, drug-induced, etc. The main reason for establishing a link between the use of psychoactive substances and the development of schizophrenia is the appearance of productive symptoms, which becomes chronic.*

**Keywords:** *schizophrenia, recreational use of psychoactive substances, manifest period of paranoid schizophrenia.*

**Actuality.** Epidemiological data indicate that the number of adolescents who allow non-medical use of psychoactive substances continues to increase progressively in all developed countries of the world. The neuropsychological architectonics of the adolescent period is extremely vulnerable to any kind of stress, and recreational use of psychoactive substances is no exception. According to the literature, one of the most frequent triggers of short, abortive, sometimes lightning-fast psychotic episodes – "lightning flashes" in the pre-manifestation period is the use of psychoactive substances, and this is the predisposing factor determining the tracks of development of the manifestation of paranoid schizophrenia.

Most of the original studies and an extensive number of meta-analyses conducted to date agree that the existing concept of paranoid schizophrenia presupposes the presence of a complex cluster of pathological agents playing a dominant role in the etiopathogenetic mechanism of the development of the endogenous process. The biological components of this complex are undoubtedly one of the leading factors in the development of the trajectories of the clinical course of paranoid schizophrenia. Unfortunately, the current level of knowledge about paranoid schizophrenia does not allow us to indicate with great conviction the direct biological harms leading to the initiation of the disease. However, it has been convincingly proven that comorbid conditions in general, and the use of psychoactive substances in particular, significantly worsen the course and prognosis of the disease.

**Aim of Research.** To establish the effect on the psych productive profile of recreational psychoactive substance use in the manifest period of paranoid schizophrenia.

**Materials and methods of research.** 72 patients were examined with a verified diagnosis in accordance with ICD-10 "paranoid schizophrenia (F-20. xx)", with an average disease duration of 3.6 years. The presented sample of patients was characterized by an average age of 22.2±1.39 years ( $p<0.05$ ). The criterion for the formation of the study group was the use of psychoactive substances in adolescence lasting no more than 2.5 months without objective signs of dependence. The comparison group was represented by patients with paranoid schizophrenia, comparable in

biological and social factors with the main group, but without a history of surfactant use, the comparison group included 36 respondents.

In order to avoid unreliable and contradictory data related to the peculiarity of various psychometric scales and their insufficient validity and adaptation, the assessment of negative symptoms in the studied respondents was carried out using the classic PANSS test- The Positive and Negative Syndrome Scale (Stanley Kay, Lewis Opler, and Abraham Fishbein).

Since ineffective coping mechanisms have recently been given increasing importance in a number of factors contributing to the onset of narcotization, as well as disruptions of remissions and relapses of drug addiction, an individual style of coping with stress has been studied. For this purpose, the method of determining individual coping strategies by E. Heim was used. Of the 26 statements concerning the characteristics of behavior in stressful situations, the patient was asked to choose the most familiar ones for himself. Each statement is associated with a specific coping strategy. The analysis of the results was carried out using a special key, where coping strategies are divided into three subgroups (cognitive, emotional, behavioral) and are evaluated as productive (helping to cope with stress quickly and successfully), relatively productive (helping only with a small amount of stress) and unproductive (contributing to stress). The technique was used to diagnose unproductive patterns of behavior, as well as personal resources.

**Results and discussion.** A retrospective analysis showed that the vast majority of patients with recreational use of psychoactive substances were limited to the use of opium-hashish 26.2%, synthetic 31.5% or cannabinoid 39.2% psychoactive substances, the occurrence of multiple use occurred in 3.1% of cases.

The onset of cannabinoid narcotization occurred at an earlier (under 15 years of age) adolescence (73% of patients with  $p < 0.003$ ). Cases of exposure to hashish over the age of 20 among patients with opium-hashish poly-drug addiction were isolated and relatively more frequent among patients with opium mono-drug addiction (1% of patients in the main group  $p > 0.05$ ). The average age of initiation of hashish use was  $14.8 \pm 2.1$  years in patients of the main group,  $16.1 \pm 0.6$  years ( $p < 0.001$ ). Patients with opium mono-drug addiction, who had never abused cannabinoids, made 1-2 attempts to smoke hashish at the age of at least 16 years, and then completely stopped its consumption.

The first intake of cannabis drugs was most often motivated by curiosity, less often by imitation by members of the reference group and the desire to appear to be adults. However, even before the first drug test, most of them had an idea of the euphoric effect of hashish and sought to "experiment" in order to experience pleasure. In the vast majority of patients in the main group (92% of patients in the main group  $p < 0.001$ ), the first intake of cannabis was accompanied by the appearance of pronounced euphoria. In a state of intoxication, there was a rise in mood, causeless, unrestrained laughter, psychosensory disorders (brightness of color, loudness of sounds, macropsia, distortion of distance estimation), lightness in the body, the desire to move. The patients experienced a feeling of accelerated flow of thoughts, ease of changing associations. The fear, anxiety, and fear of being caught using drugs that arose in some cases were quickly replaced by fun. Only 2% of patients in the main group reported the absence of "any special sensations" at the time of the first use of cannabis. Protective reactions manifested themselves in discomfort, dry mouth, chest tightness, dizziness, palpitations, difficulty breathing, nausea and vomiting.

During the period of use of psychoactive substances, patients showed extremely low tolerance for stressful situations, which quickly led to an increase in internal tension with

subsequent actualization of psychopathological radicals, which in 34.3% of cases were psychotic in nature and tended to rapid reduction, which in retrospect allows them to be attributed to the so-called precursors or "lightning flashes" of the main endogenous process, in 46.5% of cases, the psychopathological profile was represented by obsessive-compulsive disorders of varying severity with long-term tendencies, and in 19.2% of cases, the psychopathological picture was predominantly affective disorders, with tendencies to depressive or anxiety disorders.

Taking into account this circumstance, we undertook a comparative study of the individual style of coping with stress according to the method of E. Heim (2002) in patients of both selected groups. This made it possible to evaluate coping strategies (mechanisms of coping with stress) at three levels: cognitive, emotional and behavioral. At each level, both productive (helping to cope with stress quickly and successfully) and relatively productive (helping only in some situations, with a small amount of stress) and unproductive (contributing to increased stress) were identified strategies. The results indicated the absence of significant intergroup differences in the frequency of use of one or another individual style of coping with stress. Thus, a combination of productive coping strategies alone in all the studied areas (cognitive, emotional, behavioral) was not observed in any patient. Most often, patients of both groups used unproductive or relatively productive stress coping mechanisms. Thus, at the cognitive level, only 5% of patients with opium-hashish poly-drug addiction and 6% of patients with opium addiction ( $p>0.05$ ) showed the ability to analyze and realistically assess the situation. The majority of patients (69% of patients in the main and 72% of patients in the comparison group;  $p>0.05$ ) were inclined to underestimate the problem, to absolve themselves of responsibility, relying on a "higher power". In stressful situations, they were unable to actualize personal resources, postponing the solution of the problem, but at the same time considering it possible to overcome even greater difficulties in the future. Less often, patients masked their condition by maintaining self-control and increasing self-control. Unproductive types of coping in the cognitive sphere were relatively less common (26% of patients in the main and 22% of patients in the comparison group;  $p>0.05$ ) and were characterized by complete helplessness, acceptance of the inevitability of fate and inability to find a way out of a difficult situation.

At the emotional level, a productive variant of coping mechanisms, expressed in optimism, faith in a favorable outcome of a problematic situation, was identified in 26% of patients in the main group and 30% of patients in the comparison group ( $p>0.05$ ). Somewhat more often (30% of patients in the main and 24% of patients in the comparison group;  $p>0.05$ ), patients used relatively productive mechanisms, showing a tendency to shift the solution of their problems to others or protesting against the injustice of fate. The vast majority of patients (44% of patients in the main and 46% of patients in the comparison group;  $p>0.05$ ) used non-constructive mechanisms, taking "blows of fate" for granted and falling into a state of hopelessness, suppressing negative emotions or showing aggression. In some patients, the discharge of mental tension more often occurred through emotional reaction (sobbing and crying).

At the behavioral level, productive coping strategies were characteristic of a relatively small number of patients (18% of patients in the main and 20% of patients in the comparison group;  $p>0.05$ ). To overcome difficulties, such patients most often turned to significant others for help, encouraging them to cooperate in solving the problem. The majority of patients (49% of patients in the main and 54% of patients in the comparison group;  $p>0.05$ ) used relatively productive coping mechanisms, trying to distract themselves from problems by switching to some

activity or helping other people to forget about their own difficulties. Of the unproductive behavioral coping mechanisms prevailing in 33% of patients in the main group and 26% of patients in the comparison group ( $p>0.05$ ), the leading strategy was the desire for isolation, less often active avoidance of thoughts about their troubles.

Thus, in the majority of patients with both opium-hashish poly-drug addiction and cannabinoid addiction, relatively productive cognitive and behavioral coping strategies were combined with unproductive coping mechanisms at the emotional level. A slight increase in the use of productive coping mechanisms by patients with opium addiction had no statistical significance. In patients of both groups, the overall result of responding to stress was to move away from the problem with the rejection of its constructive solution and transfer responsibility for their difficulties to others. At the same time, patients inevitably resorted to taking drugs as the most familiar and easy way to avoid difficulties.

The dimensional characteristics of patients with paranoid schizophrenia, using the PANSS psychometric scale, are indicated in Table 1.

**Table 1.**

**Characteristics of the mental state of patients with paranoid schizophrenia of both groups at the time of examination**

The PANSS indicator	$\mu \pm \sigma$ , the predominance of the average in $c_v^*$	
	The control group n=57	The main group n=84
P1 Delusion	5,04±0,63	3,25±0,82
P2 Structural thought disorders	4,11±1,10	2,95±0,86
P3 Hallucinatory behavior	4,89±0,75	3,12±1,16
P4 Excitability	3,54±1,04	2,49±0,87
P5 Delusion of grandeur	3,04±0,68	2,11±1,01
P6 Suspicion/delusion of persecution	2,88±1,05	2,19±0,69
P7 Hostility (aggressiveness)	2,11±0,90	1,68±0,79
<b>Severity of productive symptoms <math>\Sigma P</math></b>	<b>25,60±3,55</b>	<b>17,79±4,16</b>
H1 «Blunted affect»	3,26±0,74	4,85±0,94
H2 Emotional deprivation	3,11±0,70	4,55±0,92
H3 The poverty of emotional connections	3,23±0,73	5,04±1,16
H4 Passive/apathetic social withdrawal	3,00±0,82	4,77±0,90
H5 Violation of abstract thinking	2,53±0,80	3,90±1,44
H6 Lack of spontaneity and free flow of conversation	1,19±0,58	2,29±1,04
H7 Stereotypical (rigid) thinking	1,02±0,13	1,08±0,28
<b>Severity of negative symptoms <math>\Sigma N</math></b>	<b>17,33±2,17</b>	<b>26,48±4,41</b>
<b>Composite index <math>\Sigma P - \Sigma N</math></b>	<b>8,26±4,09</b>	<b>-8,69±6,76</b>

It follows from the data in the table that the psychometric indicators of the clinical picture in patients with paranoid schizophrenia with concomitant use of psychoactive substances differ sharply from similar indicators in the control group of patients.

The distribution of points in the cluster of positive symptoms for the study group was as follows, delusions P1 in the majority of respondents 59.5%, the indicator was 3 points, which indicated a low manifestation of this symptom, whereas the similar indicator of the control group was strongly pronounced and amounted to 5 points in 77.2% of the subjects. "Structural thought disorders P2" in the main group in 36.9% and 33.3% were 2 and 3 points, respectively, which is a low indicator, the severity of a similar symptom in the control group in 33.3% and 26.3% was 4 and 5 points, respectively. The average score of "hallucinatory behavior" and "excitability" in the main group were also significantly lower and for 36.6% and 56% of patients were 2, whereas in the control group for 64.9% and 54.4% of patients the same indicator was 5 and 3 points. For cluster indicators, the positive symptoms of "delusion of grandeur P5" and "hostility (aggressiveness) P7" did not significantly differ in the average score. It should be noted that the criterion of severity of positive symptoms in the control group was significantly higher and amounted to  $25.60 \pm 3.55$  points and significantly exceeded the average score of  $17.79 \pm 4.16$  of the study group. The above highlights that in the control group, the average score of the cluster "positive symptoms" was significantly higher ( $p < 0.001$ ).

**Conclusion.** In patients with recreational substance use, there is a rapid increase in psychopathic personality changes in the form of a combination of excitable and paranoid traits with a high level of aggressiveness. Anosognosia is characteristic in relation to cannabinoid dependence, even if there is criticism of opiate abuse. During the period of use of psychoactive substances, patients showed extremely low tolerance for stressful situations, which quickly led to an increase in internal tension, followed by the actualization of psychopathological radicals, which were psychotic in nature and tended to rapidly decrease, which in retrospect allows them to be attributed to the so-called harbingers or "lightning flashes" of the main endogenous process.

In the case of a dimensional analysis of psychometric indicators, the average indicators of positive symptoms significantly decrease in patients of the main group. Clinical analysis of the positive syndrome complex showed that paranoid and hallucinatory-paranoid syndromes prevailed in the clinical picture of paranoid schizophrenia. There were no significant differences in the frequency of occurrence of individual clinical manifestations of positive and deficiency disorders.

## **REFERENCES**

1. Abdullayeva V.K., Irmukhamedov T.B. Features of the structure and severity of cognitive disorders in patients with paranoid schizophrenia with concomitant cerebral and hemodynamic disorders // узбекский медицинский журнал. – 2021. – №. special 1.
2. Ирмухамедов Т., Абдуллаева В., Маджидова Ё. Клинико-динамические особенности социального и когнитивного функционирования больных параноидной шизофренией с неврологическими нарушениями // Неврология. – 2021. – Т. 1. – №. 3. – р. 57-57.
3. Рогов А. В., Абдуллаева В. К. Особенности социальной адаптации и качества жизни больных параноидной шизофренией, сочетанной с хроническими вирусными гепатитами // Актуальные проблемы психиатрии и наркологии в современных условиях. – 2020. – р. 119-120.

4. Рогов А. В., Абдуллаева В. К. Особенности проблемно-решающего поведения у больных параноидной шизофренией с сопутствующими вирусными гепатитами //Новый день в медицине. – 2019. – №. 2. – р. 47-49.
5. Рогов А. В., Абдуллаева В. К. Характеристики стратегии выбора у больных параноидной шизофренией с сопутствующими вирусными гепатитами //Актуальные вопросы фундаментальной и клинической медицины. – 2020. – р. 419-422.
6. Irmuhamedov T. B. et al. Clinical and psychopatological characteristics of vascular diseases of brain in patients with paranoid schizophrenia //Annals of the Romanian Society for Cell Biology. – 2021. – р. 13080-13085.
7. Irmuhamedov T. B., Abdullaeva V. K. Paranoid schizophrenia and predictors of formation of the pathological hobbies //Neurodynamics. Journal of clinical psychiatry <http://doi.org/10.5281/zenodo>. – Т. 3592351.
8. Rogov A. V. et al. Some determinants of disturbances of social functioning in patients with paranoid schizophrenia with related viral hepatitis //International Journal of Psychosocial Rehabilitation. – 2020. – Т. 24. – №. 5. – р. 425-433.
9. Rogov A. V., Abdullayeva V. K. Determinant of social functioning in patients with paranoid schizophrenia with concomitant viral hepatitis //Materials of International Scientific-Practical Conference. – 2022. – р. 73.
10. Vladimirovich R. A., Aleksandrovna M. A. UDC: 616.895. 87 Violations of the planning strategy in patients with paranoid schizophrenia with related viral hepatitis //BBK 57. – 2020. – р. 112.